NORTHWEST IOWA
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December 31, 1992

92-9

Donna R. Searcy, Secretary
Federal Communications Commission
Washington, D.C. 20554

Dear Ms. Searcy: In Reply Refer to: Code 105

SUBJECT: Northwest Iowa Power Cooperative Comments

Enclosed are four copies and one original of the comments of Northwest Iowa Power Cooperative In the Matter of the Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies. We would respectfully request that these become a part of the comments filed with ET Docket No. 92-9.

Sincerely,

NORTHWEST IOWA POWER COOPERATIVE

Dennis L. Hill
Data Retrieval Manager

DLH:cah

Enclosure

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

IN THE MATTER OF

REDEVELOPMENT OF SPECTRUM TO ENCOURAGE INNOVATION IN THE USE OF NEW TELECOMMUNICATIONS TECHNOLOGIES	)	GEN DOCKET NO. 90-314 ET DOCKET NO.92-9 RM-7981 RM-8004

TO: THE COMMISSION

COMMENTS OF NORTHWEST IOWA POWER COOPERATIVE

NORTHWEST IOWA POWER COOPERATIVE
DENNIS L. HILL
DATA RETRIEVAL MANAGER
P. O. BOX 240
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DECEMBER 31, 1992

INTRODUCTION

Northwest Iowa Power Cooperative (NIPCO) is a Generation & Transmission Rural Electric Cooperative which serves 22,300 member-consumers along the western side of the State of Iowa.

NIPCO owns 30 microwave sites within our service area. These microwave sites operate in the 2 GHz microwave band and are used for indication, control and maintenance of our 852 miles of transmission line.

The microwave system is an important key to maintaining the continuity of service to our end consumers. Is is for that reason we are compelled to respond to the first report and order and third notice of proposed rule making issued by the Commission on October 16, 1992.

We would support a time span of eight years for voluntary relocation of incumbent microwave users. This time frame would provide existing 2 GHz users a term that would allow the rechannelization of 3 and 4 GHz band to develop. It would also give equipment manufacturers sufficient time to design and produce new equipment for the higher bands using the latest in technologies. It is important that the existing users are not moved into other bands without time for proper testing and field trials of new equipment designs.

The period of three years for voluntary relocation is much to short to determine the stability of the new proposed frequencies. The migration to other frequencies must be, at first, gradual to ensure that a reliable means of telecommunication for the incumbent users will be maintained.

Because developing technologies and personal communications devices would be slow to grow in rural areas, we might suggest that existing microwave users would find their migration to higher radio bands or other technologies would also be slow. We would, furthermore, like to suggest to the Commission that the voluntary transition time for rural areas be extended beyond our recommendation of eight years. As a possible choice to our proposed extension of voluntary negotiation time period for rural areas, we would recommend an additional 2 years which would allow voluntary negotiations to take place anytime beyond the established fixed voluntary negotiation period. This "floating" 2 years would be effective from the date that the request was made to the

incumbent 2 GHz user for his spectrum and would allow the incumbent user time to make plans for his relocation. This process would, thereby, allow a more flexible and smoother transition.

We would caution the Commission against allocating personal communications networks and developing technologies under Part 15, unlicensed devices. The possibility of interference to existing 2 GHz users, especially as it relates to kits or home built devices operating in this band, would be of serious consequences. If interference should develop with these devices, the chances of locating the source of this interference would be next to impossible. If the source of the interference is found, the 2 GHz microwave user has no recourse to get the problem resolved. We would request that the Commission reconsider allowing these devices to operate under Part 15.

The migration of existing 2 GHz users into the available government spectrum (1.71-1.85 GHz and 2.20-2.29 GHz) would be a good alternative to higher bands. In some cases the existing radio would only need to be retuned and antenna replaced to facilitate the move. It is a cost effective approach and would require a minimum outage while the work was being done. The estimate we have to do a station, if applied to one of our newer synthesized radios, would be in the area of $10,000.

The sharing of the 2 GHz band between microwave users and developing technologies would be an acceptable alternative to moving the existing users. Almost all developing technologies and PCN proponents state that there are no problems in sharing the band. We are willing to share the frequencies, however, strict guidelines of allowable interference levels must be written. As technologies develop, we will see more and more constraints on signal to noise figures. We cannot predict how high data transmission rates will go in the next 10 to 20 years, but one thing for sure, is that any decision we make today, we will be living with for a long time. Since bit errors and data speeds are all effected by interference, if sharing of frequencies are allowed, we would support strict co-channel and adjacent channel guidelines. These should be based on findings that are available from test data acquired from previous PCN operations around the country. We would also recommend continuing field testing to determine the consequences of shared spectrum use.

It is our recommendation that any new spur on an existing 2 GHz system should be licensed for primary status. Major extensions (as discussed in Docket 92-9, paragraph 31) needs to be better defined by the Commission. What constitutes a major extension? While it would not be practical to license and build a complete new 2 GHz system that would soon be replaced by a developing technology, we feel the license class for any expansion on an existing 2 GHz system should remain primary. In rural areas we would expect that a major extension would not be replaced by a developing technology for

another 10 to 15 years. By this time the microwave equipment has reached the end of its useful life. We see no point in issuing a secondary status license for any expansion of an existing 2 GHz system. All extensions should be granted a primary license.